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ABSTRACT

A study was conducted to determine the extent to which student needs for nonsexist career guidance and education are met by existing and developing career education strategies at the secondary school level and to propose areas for further development. Through a literature search and the examination of teachers, counselors, and students, a set of needs was identified and organized into three categories: knowledge about occupational sex-role stereotyping and career decision-making; non-sexist attitudes; and behavior or activity to reduce stereotyping and broaden career choice. From the little information available on strategies designed to deal with this problem, it was determined that most strategies concentrate on the knowledge and attitude needs. Factors that contribute to effective strategies were found to include the following: in-service training for school staff; use of content material based on the students' experiences; early intervention; and follow-up support for students. Since career education can play a vital part in reducing sex-role stereotyping, this report recommends that it focus on the above four factors as well as on (1) activities that increase young women's career motivation and help them plan realistically for the future; (2) resource centers for school personnel for non-sexist career education and curricula materials; (3) evaluation studies; and (4) community-based programs and activities that aid students in increasing career awareness. (Author/ELG)

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CURRENT PERSPECTIVES ON THE ROLE OF CAREER EDUCATION IN COMBATTING OCCUPATIONAL SEX-ROLE STEREOTYPING

May 1978

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ABSTRACT

CURRENT PERSPECTIVES ON THE ROLE OF CAREER EDUCATION IN COMBATTING OCCUPATIONAL SEX-ROLE STEREOTYPING

A review of the literature and other sources of information regarding program materials was conducted to investigate the role of career education in combatting occupational sex-role stereotyping at the secondary school level. The primary goals of this study were to describe the extent to which student needs for non-sexist career guidance and education are being met by existing and developing career education strategies and to propose areas where further activity could be undertaken by career education programs. The specific objectives of the study were to 1) identify a set of student needs that may be addressed by career education programs, 2) locate strategies for reducing occupational sex-role stereotyping in high school students, 3) compare the strategies with identified student needs, 4) summarize the general findings, and 5) determine the implications for career education. A set of needs were identified and organized into three categories: Knowledge (about occupational sex-role stereotyping and career decision-making), Attitude (non-sexist attitudes about self and others), and Behavior (activity to reduce occupational sex-role stereotyping and to broaden career choice). The review of the literature revealed that most sources of information describe the problem of occupational sex-role stereotyping while much less information is available about intervention strategies that can reduce occupational sex-role stereotyping. Available strategies primarily address Knowledge and Attitude needs and occur in the classroom or counseling services. There are fewer strategies that address Behavior needs and those are likely to occur in school-wide or community-based activities. From the evidence that is available some factors can be identified that contribute to effectiveness: in-service training for school staff; the use of content material based on the reality of high school students' experience; early intervention; and follow-up support and encouragement. This study found that career education can play a vital role in reducing occupational sex-role stereotyping. Specific recommendations for people involved in developing career education programs include: 1) including follow-up support, encouragement and direction for students involved in career education activities, 2) emphasizing activities that will increase young women's career motivation and help them to plan realistically

for the future, 3) carrying out short-term and long-term evaluation studies, 4) assuming a leadership role in providing in-service staff training, 5) creating a resource center for school personnel for non-sexist career education and curricula materials, and information about other intervention activities and strategies, and 6) expanding on community-based programs and other activities that enable students to apply increased awareness to career related decisions, education and training.

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INTRODUCTION

Occupational choice and occupational success are strongly affected by sex-role stereotyping and sex bias, as is readily apparent from a glance at the world of work. The schools, reflecting the norms of the broader society and the world of work, serve as carriers of ideas about what constitute suitable career and educational options for young men and women. The American Association of School Administrators' Advisory Commission on Sex Equality in Education has assessed this relationship between the schools and the work world. They state that, as society has restricted men and women by putting overt or implied sex-role labels on jobs, the schools, either expressly or by implication, have labeled courses such as home economics or shop as suitable for either boys or girls. In a similar parallel, society, in its media, advertising, and fiction, presents images that reinforce stereotypes as do schools through their textbooks and career guidance materials (AASA 1977).

Recently, however, these traditional ideas are being widely questioned. The existence of sex bias in education and the work world, as well as in personal relationships, has been carefully observed and documented by writers, reporters, teachers, researchers, labor market analysts and political candidates. Schools are also involved in this re-examination process. New educational programs such as career education are seeking ways to bring about change that will open new doors for all students. One example is Experience-Based Career Education, which involves students directly in the community and provides an opportunity for them to gain realistic information about men and women in the world of work.

Career education is a broad educational concept that has been defined as "the totality of experiences through which one learns about and prepares to engage in work as a part of her or his way of living" (Hoyt, 1975). This definition considers 'career' as the totality of work that takes place during a lifetime and 'education' as all the experiences through which one learns. Career education developed partially in response to unmet needs within the existing school structure. Kenneth Hoyt's policy paper on career education, prepared for the Office of Education, lists among eleven conditions calling for educational reform the following: "The growing need for and presence of women in the work force has not been reflected adequately in either the educational or the career options typically pictured for girls enrolled in our

educational system." Hoyt also states that "occupational stereotyping hinders full freedom of occupational choice both of females and for minority students. These restrictions can be reduced to some extent, through programmatic intervention strategies..." Thus, it appears that career education was seen from its inception as an appropriate mechanism for reducing occupational sex-role stereotyping and broadening career choice for students.

The objective of this study is to describe the extent to which student needs for non-sexist occupational education are being met by existing and developing career-education strategies. It will identify, through a search of the literature, a set of needs that may be addressed by career education programs. Through a further examination of the literature and materials for teachers, counselors, and students it will locate intervention strategies for reducing occupational sex-role stereotyping in high school students. An organizational scheme will be developed for classifying and describing the needs and strategies on important dimensions. This study will then compare the strategies with identified student needs. In conclusion, it will summarize and discuss the major findings of the study and the implications for career education.

A major source of information for this study was an ERIC search that cross-referenced indicators such as 'career education' and 'vocational counseling' with indicators such as 'sex-role stereotyping' and 'sex bias.' Several projects at Far West Laboratory that focus in part on sex desegregation in the schools also provided sources of information. In addition, the library of the Women's Educational Equity Communications Network Project (WEECN) and the San Mateo Educational Resource Center served as important sources of data. A panel of professional educators in the field of sex-equity acted as consultants to the study.

There are broader concerns that this study will not be able to examine, but that have a direct relationship to the effectiveness of career education programs. These include: the state of the economy in general, the availability of jobs within each community, and the attitudes of employers in each community about providing equal opportunity and hiring people into non-traditional jobs. These factors all play an important and integral part in the school's efforts to reduce occupational sex-role stereotyping.

It is hoped that by focusing this research on career education programs some important information and an overall perspective on the adequacy of

intervention strategies and programs can be provided. This assessment will add to the information administrators and other decision makers need as they determine policy in their schools.

THE PROBLEM OF OCCUPATIONAL SEX-ROLE STEREOTYPING

Occupational Sex-Role Stereotyping in the Schools

The sex-role socialization process is already well established by the time students enter school. Early childhood socialization presents a clear message concerning the role society expects men and women to play. While boys are channeled into activities involving competition and risk, winners and losers, girls are channeled into low-risk pastimes emphasizing accomodation and inclusiveness. (Lee and Grapper, 1974; Sutton-Smith, 1972.)

Teachers and other school personnel continue the process of orienting their male and female students toward traditional sex-roles. Guttentag and Bray (1976), in the first chapter of their work on undoing sex-role stereotypes in the schools, discuss teacher behavior as it relates to achievement issues and future plans of students. They find that teachers are aware of the concerns about sexism, but "nonetheless perceive boys and girls to be radically different, believe they want to be treated differently and see the teacher's role as one of meeting, rather than shaping these needs." Teachers prefer and encourage girls to be dependent and discourage dependent boys even though 'dependency' is not often considered a desirable adult trait. The sex of the teacher apparently has little to do with changing sex-role stereotyping. According to Guttentag and Bray, both male and female teachers interact more frequently with boys and reward them for creativity and independence, while they interact less often with girls and encourage them in conformist behavior.

The occupational roles portrayed in school textbooks and guidance materials are found to be strongly stereotyped (Vetter et. al, 1975; Harway, 1976). Research also confirms that for the majority of males and females who have participated in various studies the words and images presented in materials do affect their interests and choices. (Women on Words and Images,

1975.) Females show no interest in jobs labeled as 'draftsman' or 'lineman,' but do show interest in jobs labeled as 'draftswoman.' Males show no interest in 'operator' or 'sales representative' jobs when associated with the word 'she,' but do show an interest in 'telephone operator' jobs when associated with the word 'he.'

The channeling of female students into stereotypic educational programs has been documented by a number of researchers (Lynch, 1975; Carl-Falkenstein, 1976). Allen (1976) points out that in 1972, although women comprised 55.5% of the total vocational education enrollment and 66% of all the secondary vocational enrollment, they were concentrated in programs preparing them for low wage-earning occupations such as home economics, health, and clerical work. Even when male and female course prerequisites are absent, counselors still advise boys to take shop courses and girls to enroll in home economics (Allen, 1976).

Course offerings, counseling, and what some educators call the hidden curriculum in schools tend to discourage girls from considering a wide choice of careers (Frazier and Sadler, 1974). Counselors encourage women to consider occupations compatible with family living, and discourage female students who indicate an interest in non-traditional occupations (Bird, 1969).

Teachers and counselors are frequently limited in helping students by a lack of realistic occupational knowledge, especially information about blue collar jobs (Vetter, 1975; Woal, 1976). In addition, they may not be sufficiently aware of the reality that girls face as adults in the working world.

Some consequences for females of these socialization and school experiences include lowered motivation to achieve, lowered self-confidence, and a limited vision of occupational choices. For example, as compared with boys, girls show a limited range of career aspirations as early as their pre-school years (Kirchner and Vondrank, 1973). By the fourth grade, girls' visions of occupations open to them are largely restricted to four: teaching, nursing, sales and clerical (Frazier and Sadler, 1973). Mullis (1975) examined the recent achievement data collected by the National Assessment of Educational Progress and found that female and male performance in social sciences, mathematics, and science was nearly equal at age nine. By adulthood, however, males were substantially ahead. Fennema and Sherman (1977) attributed apparent male superiority in achievement in mathematics to greater exposure to coursework and thus to opportunities to learn mathematics.

Occupational Sex-Role Stereotyping in the Working World

Contrary to the stereotyped assumptions held by many teachers and counselors, that most girls will marry, raise children and not be employed outside of the home, is the fact that women's overall participation in the labor force is increasing at an unprecedented rate. According to the Women's Bureau of the Department of Labor, fifty-three percent of the current work force is female and nearly all of these women work for economic reasons. The following factual information has been compiled by the Department of Labor and publicized in many articles on women and work.

1. Nine out of 10 women will be employed sometime in their lives.
2. The average married woman works outside of the home for 25 years and the average unmarried woman for 45 years.
3. The median wage paid to women is 57% of that paid to men.
4. More than half of all women workers have children under the age of 18 at home.
5. The most rapid increase during the past 15 years in work-force participation has occurred for women with children under age 6.
6. Most women work because of economic need; almost 2 out of every 5 working mothers are heads of households.
7. Unemployment is higher for minority women between 16-19 years of age.

In addition, occupational sex-role stereotyping has affected the earning capacity of women and limited their job opportunities. The average male with an elementary school education earns more than the average female high school graduate. The wage gap between women and men has been increasing during the last 25 years. Half of all working women are in the 21 lowest paying job categories. Women are under-represented in higher-paying skilled trades and managerial occupations. While 77% of all clerical workers are women only 5% of all skilled crafts workers are women. Men have been steadily moving into traditional "women's jobs" (librarian, social worker, teacher, etc.) while women have not been moving into traditional "men's jobs" at an equal rate. In addition to being channeled toward low-paying women's jobs, minority women face special employment problems arising from inadequate education and training

skills as well as from racial and cultural barriers (Women's Bureau, Department of Labor).

The fact that these discrepancies are allowed to exist -- despite the enactment of a variety of federal laws directed at eliminating sex discrimination, sex bias, and sex-role stereotyping -- indicates that changes made at the policymaking and judicial levels have not yet been fully implemented. Clearly, a stronger and more exacting effort must be made within the schools to help carry out the legal mandates as well as the social and economic need for change.

The Need for Change

How serious is the problem? An underlying value of this study is that the problem is critically serious and the need for change is not only desirable but urgently necessary. The study also assumes that the schools are a natural target for intervention strategies to occur as it is within this context that they can reach the greatest number of young people and have the maximum opportunity for impact.

Within career education, there are people who are already actively concerned about the problem and are working to reduce its damaging effects on both male and female students. "Women, Education and Work" was a major topic at the Third and Fourth National Forums on Education and Work, sponsored by the National Institute of Education (Taylor and others, 1977). One of the points highlighted was the need for a stronger effort to enforce the law and to develop understanding of it both within the educational system and in the communities. This understanding is criticial in order for people to realize the extent to which sex-role stereotyping diminishes the career aspirations of young women and limits the choice of both young women and men.

Educators, counselors, and administrators, meeting in the spring of 1978 at a conference sponsored by the California Coalition for Sex Equity in Education, also stressed the importance of reducing sex-role stereotyping in general within the schools, but particularly within the area of career education. They pointed out that strategies are needed in order to increase the awareness of both the school personnel people and the student. There is frequently a gap between what people understand concerning the problem and the way they continue to interact with students in the guidance office and the classroom.

Strategies are needed, as reported by professionals at this conference, to translate attitudes into behavior. Even with a willingness to change, they say, oftentimes the school does not know how to go about it. There was a frequent request for more resources, materials, and in-service training in how to implement them. Effective intervention strategies that address the students' need for non-sexist occupational education will provide an important key to change.

PRESENTATION OF THE DATA

The preceding section has outlined current views of the problem of occupational stereotyping as it is seen by those working and writing in the field. Much of the literature is still focused on delineating the problem. This study, in reviewing the literature, has looked beyond problem descriptions and searched for statements of need -- what must be changed, what needs to be done, and more specifically, what needs to be done through career education -- in order to reduce occupational sex-role stereotyping. The data to be presented in this section will consider strategies for effecting change discussed in relation to identified needs for change. It will look first at sources and types of information available to school personnel and, secondly, consider the range of specific strategies suggested for use with students.

Intervention Strategies: Sources and Types

A review of the literature reveals several sources of information about intervention strategies: research reports, descriptions of workshops for school personnel, sourcebooks and guides for teachers and counselors, descriptive summaries of strategies to reduce sex bias in vocational educational programs, and descriptive reports on planned program interventions in vocational and career education.

The content of the materials ranges from published papers and research reports that illustrate what sex-role stereotyping and sex bias <u>are</u>, to very detailed career education curricula that can be adapted for classroom use

within the school. The following section will present an overview of intervention strategies, summarize the primary needs that they are intended to address and present selected examples.

Research Reports on Sex Discrimination and Sex Bias. There are many published reports available for school personnel that describe and document sex discrimination and sex-role stereotyping in counseling and guidance, classroom curriculum, career education materials, and assessment instruments. These comprehensive reports generally include check lists in order to help school personnel assess both their own attitudes and behavior and the materials that they use. In addition, most of these reports offer a section on specific recommendations for change and suggestions as to how to go about it. Usually these recommendations are helpful in pointing out the directions 'planned change' can take, but not detailed enough to constitute real 'training' in how to effect change. The primary needs that are addressed by these research reports are: the need for increased awareness on the part of school personnel about the extent to which sex-role stereotyping permeates their own attitudes and the materials they use; and the need to develop non-sexist career counseling techniques, teaching methods, and instructional materials.

Help Wanted, Sexism in Career Education Materials, produced by Women on Words and Images for the EPIE Institute (1975) is a small, but very effective publication. It provides clear documentation of sexism in career education materials, provides a check list for counselors to detect sexism in their own career education materials and makes suggestions for counselors to use in considering ways to effect change. *Issues of Sex Bias and Sex Fairness in Career Interest and Measurement*, edited by Esther Diamond (1975) for the National Institute of Education, is another example. This publication provides a rationale for the need for non-sexist career interest measurement tools by documenting the impact of interest inventories on career choice, showing how their use and interpretation can be biased, and outlining the legal implications of sex bias in career inventories. *Sex Discrimination in Guidance and Counseling* (Harway and others, 1976) is an extensive and definitive analysis of this subject. The primary focus is vocational guidance and counseling. *Women's Educational Equity: Annotated Selected References and Resources*, a publication of the Women's Educational Equity Communications Network (WEECN, 1977), lists a combination of major print materials and library collections

that present an introductory overview of sexism in education.

Workshops for School Personnel. A second source of information about intervention strategies is found in descriptions of workshops for counselors, teachers and administrators that are designed to increase their awareness about the problem of sex-role stereotyping and sex bias in the schools, and in particular, in career education programs, and to give them training in how to implement effective change strategies. These materials define the specific goals of the workshops, outline the format, and describe the training activities and materials used. The scope of these workshops is very broad, from workshop strategies designed to have a national impact to single workshops with teachers in a particular school district. The primary needs that are addressed by these training workshops are: the need for increased awareness about sex-role stereotyping, the need to develop non-sexist teaching and counseling methods and the need to provide students with non-sexist career education curriculum materials.

A secondary need, which is not directly identified as such in the literature on reducing occupational sex-role stereotyping, but which is identified as important to successfully implement change strategies, is the need for school personnel to be provided with the kind of in-service training that workshops provide. These descriptive materials emphasize strongly that in-service training is critical to implementing successful change strategies.

The "Sex Equality in Guidance Opportunities" Project (SEGO) is an example of a workshop strategy that was national in scope. It was sponsored by the American Personnel and Guidance Association. SEGO selected individual people from each of the 50 states who were then given 4 days of training in sex-fair educational practices. The training provided factual information, access to resources, and sessions on how to implement change. These trainers then returned to their respective states and held workshops for school personnel. With this kind of 'ripple' effect, it is estimated that 7,000 participants were reached.

Reducing Sex-Role Stereotyping Through Career Education (Quinn, 1975) is the title given to in-service teacher workshops that were held in Bristol, Connecticut. The goals of the workshop were to heighten awareness of sex-role stereotyping and its relationship to career education, and to have the teachers design and implement career units in their respective classrooms for each area of study such as biology, clothing, and business.

Sourcebooks and Guides for Teachers and Counselors. The majority of materials on intervention strategies are found in the form of sourcebooks and guides directed toward teachers and counselors. These materials provide written information to help increase awareness about the need for change, but their primary focus is on providing check lists for school personnel to ensure that instrucional materials, teaching and counseling methods, and school policies are equitable and free of sex bias. In addition, they provide detailed examples of activities that counselors can use with students to increase their awareness and career decision-making skills and of curricula that teachers can use in their classroom lessons. They almost always have a section on other suggested avenues for change and a listing of other resources that are available.

The primary needs that are addressed by these sourcebooks and guides are the need for increased awareness on the part of school personnel about sex-role stereotyping, the need to develop non-sexist teaching and counseling methods, and the need to provide students with activities that will enable them to broaden their awareness, increase their career motivation, and develop decision-making skills.

There are many useful sourcebooks available for the educator who is seeking information about how to reduce occupational sex-role stereotyping in the schools. One example is *Preparing Young Women for Tomorrow: A Handbook of Career Counseling Strategies for Intermediate and High School Women*, by Shirley Majchrzak (1975). It outlines a series of activities for counselors to use in initiating and carrying out a comprehensive Vocational Readiness Program. In addition, it provides them with materials in the form of games and activities that can be used with students.

The Center for Vocational Education in Ohio has published a similar sourcebook: *Resources on Eliminating Sex-Role Stereotyping in Vocational Education* (1977). As the title implies, this publication is directed at Vocational Education teachers. It provides concrete suggestions for non-sexist teaching and activities that will engage the student in learning about and analyzing sex-roles. It has compiled information on the whole problem of sex equity and the world of work into a very readable format.

Feminists Northwest has published a similar sourcebook that is directed at other classroom teachers and provides them with classroom awareness activities and non-sexist approaches to teaching. *Planning for Free Lives:*

Curriculum Materials for Combatting Sex Stereotyping in Home Economics, Family Living, and Career Awareness Courses (1975) is a valuable resource for teachers who are not directly responsible for career education, but see that they can be effective within the scope of their own particular classroom.

Other examples of sourcebooks and guides for teachers and counselors include: *Women at Work: A Counselor's Sourcebook* (Farmer and Backer, 1975), and *Planning Ahead for the World of Work: Curriculum Materials* (Vetter and Sethney, 1975). An annotated bibliography, *Non-Sexist Career Counseling for Women: Annotated Selected References and Resources*, Parts I and II, is published by the Women's Educational Equity Communications Network (WEECN, 1978).

Descriptive Summaries of Strategies to Reduce Sex Bias in Vocational Educational Programs. This source of information about intervention strategies includes published surveys of strategies to reduce occupational sex-role stereotyping specifically in vocational education programs. They are included here because, although they are secondary sources of information about intervention strategies, they present good overall summaries of what has been done and the obstacles that were encountered. The primary need that they address is the need to find programs which have been successfully implemented in the areas of vocational education and to analyze them to determine what factors helped to ensure their effectiveness.

For example, *A Review of Literature Concerning Behaviors Which Inhibit or Reduce Sex Bias and Sex-Role Stereotyping* (Beach, 1977) searched the literature in order to identify specific behaviors implemented by teachers and counselors that directly contributed to the success of a program. Of the 57 references selected from five data bases, the author notes that 45 were descriptive of the problems of sex bias and sex-role stereotyping, while only 12 provided information regarding behaviors actually implemented to reduce sex bias and sex-role stereotyping. Within this context, the study identifies seven behaviors of vocational educators that serve to inhibit or reduce sex bias and sex-role stereotyping in vocational education. These are: 1) Informing girls and women of opportunities available in non-traditional education and employment; 2) Providing personal support and encouragement to females involved in non-traditional programs; 3) Helping women anticipate problems which accompany their participation in non-traditional programs; 4) Identifying elements of sex bias and sex-role stereotyping in recruitment and information materials; 5) Providing vocational educators with information about the problems of sex

bias and sex-role stereotyping; 6) Providing specific opportunities for vocational educators to formulate plans of action for reducing sex bias and sex-role stereotyping; and 7) Training individuals to function as local resource persons on the subject of sex bias in education.

This study also identifies behaviors of other educators that reduce sex bias and sex-role stereotyping in the schools. These are: 1) Providing workshop training in sex fair educational practices; 2) Teaching female students how to help other students learn about non-traditional careers; 3) Implementing classroom activities about sex bias for elementary school students; 4) Educating parents about the limits of sex-role stereotyping; 5) Sharing ideas and information about non-sexist education and non-sexist teacher training. An interesting discovery made in this study was that no behaviors to reduce sex bias were found to be the result of individual initiative. Those that were found were the result of specific organizational efforts and pilot programs.

A study by Morgan Lewis (1976), *Non-Traditional Vocational Education Programs for Women*, had a similar goal of identifying elements that were present in vocational education programs that were achieving sex desegregation. The plan was to locate ten 'pacesetter' schools (schools that had succeeded in attracting young women into non-traditional areas) and studying them in order to develop recommendations for other schools. The study was carried out in 1974-75, but the original method had to be modified because they could not find any pacesetter schools. That is, they did not find any schools which had developed specific procedures to enroll female students in non-traditional areas. They did find some schools that had female students (as many as 5) in non-traditional courses. In these schools, the researchers found that the female students had enrolled in non-traditional courses because of individual interests. The teachers were receptive to them, but did not show any overt enthusiasm or encouragement. The decisions made by these young women were made independently and did not reflect any similarity in previous educational experience or family background. They were indeed acting 'independently' as they did not receive active encouragement from the counselors in regard to their choices.

Exemplary Strategies for Elimination of Sex Bias in Vocational Programs (Maher, 1976) is another report of a survey of successful vocational educational intervention strategies. This study set up five categories of strategies

which it then researched. The five categories were: 1) projects to increase student awareness; 2) projects to recruit women into non-traditional areas; 3) conferences to create a concern; 4) the development of non-sexist materials; and 5) projects to review and revise existing materials. The study did find strategies in each of these areas, some examples of which will be described in the following section. It found very little evidence of evaluation. Most projects are in the developmental stage, or if there has been an evaluation, it has not been reported on to any great extent. The Maher study is intended to have a second stage that will look for evidence of evaluation.

In addition to projects being in varying stages of completion and therefore lacking in evaluation, the Maher study pinpointed other obstacles to achieving their research goals. The major obstacle to the identification of projects and resources was the lack of a coordinated system of information regarding intervention efforts. Also, the research was impeded by the lack of acceptable materials, and a concern for the quality of Title IX evaluations, which was one resource used to carry out the research.

Descriptive Reports on Planned Program Interventions in Vocational and Career Education. Some of the most informative material is found in the limited number of reports on specific program interventions with students. These reports also have the most evidence in regard to evaluation of their effectiveness. The primary needs that they address are to encourage students to enroll in non-traditional programs and to broaden their career expectations.

One of the earliest and most successful programs that has been reported on was not developed by school personnel, although it, or adaptations of it, have been implemented in the schools. Since 1971, the YWCA of Los Angeles has been running an experimental program in the public high schools to prepare young women (and men) for some of the realities they will face later in life. Their "Vocational Readiness Program" includes some very specific and structured activities that challenge the 'myth of happily ever after' and provide students with realistic information about the world of work, their prospective role in it, the falsehood of viewing marriage and family as a lifelong career goal, and the range of occupational choice available to them with their present educational backgrounds. Although there has not been any long-term evaluation or follow-up on the students who have participated in their workshops, the YWCA is conducting an on-going assessment of the responses of students and teachers to the workshops. They record highly positive responses from both

groups and have also identified specific areas that need further development. These include: more careful training of counselors and teachers who will facilitate the workshops (the success of the program depends very much on the effect of the facilitators); some revisions to ensure that it is appropriate for all racial and economic groups; an updating of some of the occupational materials to include new job categories; the development of additional tools to instruct students in the skill of interviewing for jobs; more components that are directed toward male students; and more specific and flexible guidelines for counselors to use in implementing the program. The YWCA staff has also identified two areas for further study: determining what else is needed in the school context to maximize the effectiveness of the program; and exploring the possibility of incorporating training for students who can then act as peer counselors within the schools.

"Project E.V.E." (Equal Vocational Education) was carried out by the Texas Center for Human Resources, in Houston, Texas. The goal of this project was to encourage the enrollment of girls in non-traditional vocational education programs. This project had several components which were carefully implemented. These were: 1) providing information and individual counseling; 2) assisting in course registration; 3) arranging for counselors to attend class with the students to anticipate problems and deal with them before they develop; 4) holding weekly meetings with teachers on a regular basis. This planned approach was very successful. Female students enrolled in <u>every</u> vocational course available and their numbers <u>doubled</u> in auto mechanics, air conditioning, metals, radio and T.V., and plumbing.

"New Pioneers Project," in North Carolina, trained teachers through a summer institute to become resource people in the schools. Consultants were available from each vocational education subject area and helped teachers to prepare action plans to be carried out in the schools. As a result of these interventions, an additional 1,000 female students enrolled in agriculture, 700 more in trade and industrial education, and 1300 males in home economics.

"Project Women -- in a Man's World of Work" (Bobowski, 1975) is an example of a project that addressed both students and school personnel. Through the use of orientation meetings, meetings with counselors, field trips and discussion groups, students were trained to help in the guidance office and offer guidance to their peers. Although it was found generally that these students were able to reduce sex-role stereotyping in career guidance, no specific

assessment is available. For school personnel, the project provided workshops and training that assured that all of them would identify a particular activity to carry out in their schools. Teachers developed curriculum and counselors developed non-sexist counseling materials and techniques. The goal of ensuring that all the participants were to be involved in some ongoing aspect of change was central to the success of this project.

Student Needs and Student Strategies

Classification of Student Needs. The literature review identified student needs and strategies to be used in addressing the problem of occupational sex-role stereotyping. In order to examine the relationship between needs and strategies, classification schemes were developed for organizing the information. Table 1 presents the classification of student needs, organized around the three general headings of knowledge, attitudes, and behaviors.

Knowledge Needs. Increased knowledge is seen as the cornerstone of any planned change to reduce occupational sex-role stereotyping in the schools. Students need realistic information about women, men, and the world of work. Specific areas where knowledge is needed include facts about women's employment, the arbitrary division of jobs along sex-roles, the salary differential, knowledge of discrimination, and the laws that exist to remedy it, the economic necessity for women to work, and the multiple problems that minority women encounter. Students also need to acquire knowledge about the decision making process. This includes realistic information about the factors that contribute to making career decisions, the importance of career planning and how to approach it, knowledge about all of the occupations possible and the projected future opportunities in them, and knowledge about how to implement goals.

Attitude Needs. Students need to have non-sexist attitudes regarding themselves, others, and the world of work. It is not enough to simply provide information and realistic knowledge. There is a need for additional awareness as to how this knowledge relates to individual perceptions of occupatioanl sex-role stereotyping and career decisions. Specific areas where a change of attitude is needed include increased self-confidence and motivation, an expanded awareness of career options, and an increased awareness that family and work roles can be shared. Attitude change could well include an acceptance of

TABLE 1

Reducing Occupational Sex-Role Stereotyping Through Career Education: Classification of Needs

Educational Need Areas	Career Education Need Areas
A. Knowledge	1. Knowledge of the real world (sex-roles, facts on women's occupations, bias)
	2. Knowledge of career decision-making skills (career planning, occupational knowledge)
	3. Other
B. Attitudes	1. Non-sexist attitudes towards self (achievement, motivation, self confidence, awareness of options)
	2. Non-sexist attitudes toward others (acceptance of ideas of androgyny, variety sex-roles for men and women, equity for men and women)
	3. Other
C. Behavior	1. Exploration of a variety of educational and occupational career options
	2. Implementation of non-sexist educational and occupational career choices
	3. Other

the idea of androgyny, which views men and women as having the same range of capabilities, and an understanding that both women and men can assume a variety of roles at home and equality at work.

Behavior Needs. It is also essential for students to transform their acquired knowledge and changed attitudes into non-stereotyped behavior patterns. Particularly pertinent in the area of career education are student investigations of a wide variety of occupational and educational options, especially within the working community. Students should be capable of developing and implementing career plans that reflect their full potential. Female students, in particular, need to exhibit increased career motivation by taking a more active role in planning for their futures.

Classification of Student Strategies. A previous section has discussed sources of information in the literature that are directed at school personnel, that are intended to increase their awareness about the problem of occupational sex-role stereotyping, and that recommend specific strategies to use in working with students. This section will discuss these student-directed strategies and compare them to the student needs that have been identified.

A generalized organizational scheme for classifying strategies was developed through examining strategies found in the literature. The scheme allowed for placement of any given strategy in one or more categories representative both of its type and the setting for which it was designed. This organizational scheme is presented in Table 2. It identifies five settings (the classroom, in-school counseling, non-school counseling, school-wide activities, and community) and five possible types of strategies that may occur in each setting. The categories are not exclusive; while most strategies do fall into one particular setting, they almost always represent more than one type. Because of the importance of experiential learning and community involvement in many career education programs, the organizational scheme emphasizes both community settings and strategies that utilize non-school personnel.

The classification schemes shown in Table 1 and Table 2 were used to develop a two-way matrix (needs by strategies). This matrix provided an organizational device within which to record data from summaries of the materials found in the literature. Although the summaries had not originally been compiled with this analysis in mind, and therefore did not necessarily contain

TABLE 2

Reducing Sex-Role Stereotyping Through Career Education;
Classification of In-School and Out of School Strategies

Setting	Type of Strategy
A. In-School Counseling	1. Exposure to non-sexist materials and assessment instruments. 2. Exposure to non-sexist staff attitudes. 3. Participation in non-sexist occupational and educational counseling. 4. Exposure to persons from outside the school setting. 5. Other
B. Non-School Counseling	1. Exposure to non-sexist materials and assessment instruments. 2. Exposure to non-sexist staff attitudes. 3. Participation in non-sexist occupational and educational counseling.. 4. Exposure to persons from outside the school setting. 5. Other
C. School Classroom	1. Exposure to non-sexist informational and attitudinal material. 2. Exposure to non-sexist staff attitudes. 3. Participation in class activitives that promote the reduction of occupational and educational sex-role stereotyping. 4. Exposure in the classroom to persons from outside the school setting. 5. Other
D. School (or district) as a Whole	1. Exposure to non-sexist materials. 2. Exposure to non-sexist staff attitudes. 3. Participation in activities that promote the reduction of occupational and educational sex-role stereotyping. 4. Exposure to persons from outside the school setting. 5. Other
E. Other Community Activities (school sponsored)	1. Exposure to non-sexist informational and attitudinal material. 2. Exposure to various degrees of sexist and non-sexist attitudes. 3. Participation in activities that promote the reduction of occupational and educational sex-role stereotyping. 4. Exposure to persons from outside the school setting. 5. Other

all of the applicable information, it was possible to use the matrix as a method of organizing and presenting the information. The appendix contains a table showing the matrix and the original data. A summary of the data is presented here, discussed in relation to the setting in which the strategy is carried out.

Classroom and Counseling Services. The majority of strategies utilize the classroom and the counseling service as their setting for making an intervention with students. Through exposing students to non-sexist materials and career assessment instruments and engaging students in classroom and guidance activities, they seek to reduce occupational sex-role stereotyping. They primarily address student needs in the areas of knowledge and attitude.

To meet the need for knowledge, they provide facts and information on sex-role stereotyping in the world of work, women's role in the labor force, job bias and discrimination in women's occupations, the changing roles of both women and men in carrying out work and family responsibilities, and skills for improving and broadening career decision making and choice.

To meet the need for a change in attitude, the materials and activities used in these intervention strategies challenge the students to examine their own attitudes about sex-role stereotyping in regard to their perceptions of men and women in general and themselves as male or female.

There is less emphasis on changing behavior. These strategies do involve the students in active exploration of occupational sex-role stereotyping through classroom projects, career interest inventories and games, but they do not necessarily translate the insights learned into choices students make about courses of study, future educational and/or career goals, or day-to-day behavior and interaction with other people. (There are specific projects to recruit students into non-traditional vocational education courses or work experiences in the community. These are discussed below under 'school-wide' and 'community' strategies.)

School-Wide Strategies. The second, most frequently targeted area for intervention strategies can best be described as 'school-wide.' These strategies involve many elements of the school:-- vocational educational personnel, other classroom teachers, counselors and resource materials -- and also bring community people into the school.

To meet the student need for knowledge, they provide facts and information about men and women in non-traditional jobs, a broadened range of occupations,

future areas of job opportunity, and the educational and training requirements needed to achieve various occupational goals.

To meet the need for a change in attitude, these strategies challenge students' assumptions about 'appropriate' jobs for men and women, as well as what is 'appropriate' for themselves. They attempt to increase achievement motivation, self-confidence and awareness of job options, and encourage students to accept the career choice of others and the idea of equity for men and women in the job market.

There is more emphasis in these strategies on effecting a change in behavior than in the ones described for the classroom and counseling services. These strategies may actively involve students in exploring non-traditional courses of study through short-term exposure to people and resources of a non-traditional nature and recruit students to register for non-traditional courses of study in order to acquire substantive training.

Non-School Counseling. This type of strategy refers to programs that aim to reduce occupational sex-role stereotyping in the schools and with students but are initated by groups who are outside of the school. These groups design workshops and plan activities for students that are carried out in the school or at a location in the community. Their focus is mainly on female students. Through exposing young women to non-sexist materials and engaging them in suitable activities, it is hoped to increase their awareness of the future and the need to plan realistically for it. The strategies primarily address student needs in the areas of knowledge and attitude.

To meet the need for knowledge, the strategies provide facts and information on sex-role stereotyping, sex bias and sex discrimination in the world of work, statistics on women's participation in the labor force, statistics on the rate of divorce and other realities of marriage and family life, and information on the process of career decision making.

To meet the need for a change in attitude, the materials and strategies used in these activities challenge the students to re-examine their own expectations for their futures in the light of new information and to understand how these expectations are shaped by sex-role stereotyping. The strategies attempt to increase career motivation, self-confidence, and an awareness that there are many possible options in addition to the few stereotyped ones which high school women generally hold.

Again, there is less emphasis on behavior. These strategies do not

directly translate the insights learned from the exploration state to a stage of implementation.

Other Community Activities. This type of intervention strategy has the community as its setting. These strategies are initated by the schools and their goal is to reduce occupational sex-role stereotyping by involving the student directly in work exploration and work experience in the community. The strategies meet the student need for knowledge by providing her/him with the opportunity to talk and/or work with women and men in non-traditional jobs. This also provides the students with first-hand information about what skills are required for various occupations and gives them an opportunity to examine their own interests and capabilities.

To meet the student need for a change in attitude regarding sex-role stereotyping, these strategies provide the opportunity to experience a range of sexist and non-sexist attitudes and to observe a variety of sex roles for men and women. These activities serve to increase achievement and career motivation, strengthen self-confidence, and broaden career options.

Again, there is more emphasis here on effecting a change in behavior. In these activities the students experience a variety of jobs and, where there are opportunities to engage in on-the-job training, begin to implement choices..

DISCUSSION OF FINDINGS

Availability of Information and Resources

This study has found, as have other research studies, that there is a considerable amount of difficulty attached to finding information about intervention strategies to reduce occupational sex-role stereotyping. Information is available, and efforts such as the Women's Educational Equity Communicatior Network (WEECN), are being developed to disseminate it, but for the average counselor or teacher in the schools knowing where and how to obtain it can present a major obstacle. Even if sources of information are located, it is time consuming to get the materials in hand as it is frequently a mail order process. The teacher or counselor is required to make some estimate of what

resources would be most useful and appropriate for their situation on the basis of reading brief descriptions and there is a high risk that the materials, when they arrive, will not be adequate. There is a pressing need for school districts to establish a local resource that will make all of these materials directly and readily available to school personnel.

Type of Resources

A second finding of this study concerns the type of resources found. The majority of resources define the problem of sex bias in the schools. There is a continued need for this type of information as many school personnel are still not aware of the problem, or are not convinced that it is serious enough to require their active concern. This observation is supported by the panel of professionals in sex equity in education who served as consultants to this study. They were in unanimous agreement that 'increased awareness of the problem' and 'a change in attitude regarding its urgency' still constitute the most pressing needs. Much of the material that is primarily concerned with discussion of the problem does also give suggestions on strategies that can be implemented. However, these are too abbreviated for most people to adapt effectively and are more useful in suggesting the direction that change can take.

Resources that are intended to assist directly in changing students' knowledge, attitudes, and behavior are often inadequate and incomplete. Many resources require the use of some materials or worksheets that the counselor or teacher need to create in order to use the strategy. Strategies which require no additional materials or kits which provide all the materials are much more apt to be used, but there are not enough of these. If resources are complete and ready for direct use, they often do not provide enough specific direction in 'how' to carry out the prescribed activity. The YWCA's "Vocational Readiness Program" identifies this as being critical. They are revising their package of materials to include more specific direction for school personnel regarding their usage (for example, specifying the amount of time to allot to each activity and the questions to ask students following the activity).

Most strategies have been developed to occur in the classroom or counseling

setting, but as the Beach study revealed, teachers and counselors themselves need the encouragement and support of the wider school administration. Beach found no cases where individuals in the school initiated change themselves; a larger organizational effort is needed. Materials on intervention strategies directed at counselors and teachers could be more effective if they included clear information on strategies for these people to use to gain the support of the wider school administration. An increased effort needs to be made to direct materials and information about the problem to school administrators themselves.

Focus of Intervention

As previously reported in this study, the goal of the great majority of strategies is to effect a change in student knowledge and attitudes about occupational sex-role stereotyping. Some strategies also affect behavior by involving the students actively in career exploration. At the secondary level there are strategies which have a direct impact on career choice such as recruitment of students to non-traditional courses of study, job exploration, and work experience in the community. More programs of this nature need to be developed and implemented. Strategies are also needed for students to learn the 'process' of career decision making and the 'process' for implementing decisions.

Young women in particular need to be encouraged to increase their motivation to plan and pursue a career. Traditional models for career decision making and implementation are constructed for primarily male populations (Falk and Cosby, 1974) and assume a developmental sequence of education (exploration of future occupational chcice, work experience and/or further education, application to career goals, and continued, uninterrupted pursuit of these goals). There are more developmental stages for women, with a relatively greater complexity of factors operating within any given stage - all of which can diminish career motivation. Some of the more critical contingencies that affect female motivation are marital and child-bearing plans, husband's occupational expectations and real discriminatory practices in the job market. Although all of these areas are being confronted with social change, they will continue to be major factors that influence female career success. New strategies that address these issues effectively are critically needed.

Factors that Contribute to Effectiveness

This study found minimal evidence of evaluation attached to strategies currently being implemented. Many programs are still in the process of being developed and piloted in schools and are just at the point of starting evaluation. The existing evaluative evidence concerns the more immediate impact of an intervention. This evidence does provide some valuable insight as to what factors contribute to the ability of an intervention to achieve an immediate positive effect.

Training of school staff is an essential ingredient. Studies indicate that the counselor and/or teacher can have a major impact, but must be very skillful. (SEGO, Guttentag and Bray (Los Angeles), YWCA).

In planned strategies, the use of the Echo Technique has been shown to be particularly effective. The YWCA's Vocational Readiness Program uses real (but not identified) examples of former high school students and their lives following graduation as data for their activities. This presents students with a much stronger reality within which to examine their own attitudes about the future.

Early intervention is stressed. Sex-role stereotyping defines work roles by age six or seven, and this forms the cornerstone of career orientation from which career choice will be made at a later age (Forum, 1977). The earlier that interventions occur, the more opportunity is available for follow-up and for students to engage in work exploration and work training programs. This is critical for the many students who end their formal training at high school.

Strategies that have careful and specific plans for encouraging students to make program choices and then include follow-up support and encouragement are highly successful in altering the number of male and female students in non-traditional vocational educational programs (E.V.E., New Pioneers Project). One unique intervention, "The Career Exploration Project for High School Senior Women" (Maher, 1976), included parents in the support network that was developed as an intergral part of their strategy. Their follow-up support also deliberately followed students who attended the local university through their first year of college.

The small amount of evaluative evidence that is available does provide important, but limited information about planning effective intervention strategies. In addition to more short-term evaluation studies, there is a particular need for long term follow-up studies to determine what lasting effect is achieved. It is of interest to note that although 'role models' are assumed by the literature to be an important factor in reducing occupational sex-role stereotyping, no evidence concerning the effectiveness of this factor was found.

The interventions that are currently being tested are intended to address needs that have already been identified. Further research is needed to identify other areas of need. In addition, information and strategies are needed to plan for going beyond the 'pilot' stage to make non-sexist teaching, counseling, course selection procedures and other school practices an integral and permanent part of the educational experience.

IMPLICATIONS FOR CAREER EDUCATION

Those writing in the field of sex-equity have presented a strong case for using strenuous efforts to reduce occupational sex-role stereotyping in the schools. From examination of the strategies and materials developed it appears that career education can serve as a useful vehicle for addressing this need. Because of its broad base and its pivotal position in education, career education has the flexibility and the opportunity to reach the classroom, counseling services, vocational educational programs, parents and the larger community outside of the school. It can involve administrators, teachers and counselors, as well as students. This comprehensive capability is a great asset in efforts to reduce occupational sex-role stereotyping. The following recommendations are addressed to people who are involved in career education programming in the schools and reflect the most important implications drawn from this study.

1. The available intervention activities need to be extended to include a component for <u>applying</u> increased student awareness about occupational sex-role stereotyping to day-to-day behavior and decisions that affect career direction. Specific planning for follow-up support, encouragement and direction need to be included.

2. Persons responsible for developing career education programs and activities need to emphasize those that will increase young women's career motivation and help them to plan realistically for the future.

3. Those implementing career education programs should assume responsibility for evaluation of efforts to reduce sex-role stereotyping, especially long-term follow-up research. This information is critically needed for two reasons: a) to assure that intervention strategies being used are meeting the identified needs and b) to get beyond the 'pilot stage' and integrate non-sexist career education into the normal practices and on-going activities of the school.

4. Career education specialists can assume a leadership role in providing in-service training in sex-equity for teachers, counselors and other school personnel.

5. Career education specialists can be instrumental in creating a central resource for non-sexist career education and other curricula materials, including information about strategies and activities that can be implemented in the classroom and counseling services. A central resource within the school, or within a school district, would provide direct and immediate access to resources for teachers and other school personnel.

6. Career education programs need to expand on their ability to incorporate the larger community outside of the school. This can be particularly advantageous in meeting the students' need for more realistic information about the world of work and for the opportunity to explore non-traditional occupations.

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TABLE A

NUMBER OF MATCHES BETWEEN NEEDS AND STRATEGIES FOUND IN THE REVIEW OF MATERIALS

CAREER EDUCATION STRATEGIES	STUDENT NEEDS								
	Knowledge			Attitude			Behavior		
	Real World	Career Skills	Other	Self	Other Persons	Other	Explore	Imple-ment	Other
IN-SCHOOL COUNSELING									
1. Exposure to non-sexist materials and assessment instruments.	13	16		13	5		11	1	
2. Exposure to non-sexist staff attitudes.	2	1		1					
3. Participation in non-sexist occupational and educational counseling.	16	13		17	3		14		
4. Exposure to persons from outside the school setting	1			1					
NON-SCHOOL COUNSELING									
1. Exposure to non-sexist materials and assessment instruments.	4	4		4	1		4	1	
2. Exposure to non-sexist staff attitudes.	3	3		1					
3. Participation in non-sexist occupational and educational counseling.	3	3		3	1		4		
4. Exposure in the classrcom to persons from outside the school setting.	4	3		3	1		3	1	
SCHOOL CLASSROOM									
1. Exposure to non-sexist informational and attitudinal material.	15	10		15	4		11		
2. Exposure to non-sexist staff attitudes.	1								
3. Participation in class activities that promote the reduction of occupational and educational sex-role stereotyping.	16	8	1	11	3		14		
4. Exposure in the classroom to persons from outside the school setting.	3			2	1		2		
SCHOOL (OR DISTRICT AS A WHOLE)									
1. Exposure to non-sexist materials.	7	7		7	3		4	2	
2. Exposure to non-sexist staff attitudes.	4	4		2			1		
3. Participation in activities that promote the reduction of occupational and educational sex-role stereotyping.	7	7		8	3		6	2	
4. Exposure to persons from outside the school setting.	4	4		4	1		2		
OTHER COMMUNITY ACTIVITIES (SCHOOL SPONSORED)									
1. Exposure to non-sexist informational and attitudinal material.	2	2		2					
2. Exposure to various degrees of sexist and non-sexist attitudes.	5								
3. Participation in activities that promote the reduction of occupational and educational sex-role stereotyping.	4	4		2			4		
4. Exposure to persons from outside the school setting.	3	1		3			3	2	